PERMISSION TO RE-REFER EXECUTIVE COMMUNICATION 1370 TO COMMITTEE ON SCIENCE AND TECHNOLOGY

Mr. WU. Mr. Speaker, I ask unanimous consent that Executive Communication 1370, the Department of Transportation's final rule, Human Space Flight Requirements for Crew and Space Flight Participants, be re-referred to the Committee on Science and Technology.

The SPEAKER pro tempore. Is there objection to the request of the gentleman from Oregon?

There was no objection.

10,000 TRAINED BY 2010 ACT

Mr. WU. Mr. Speaker, I move to suspend the rules and pass the bill (H.R. 1467) to authorize the National Science Foundation to award grants to institutions of higher education to develop and offer education and training programs.

The Clerk read the title of the bill.

The text of the bill is as follows:

H.R. 1467

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the ''10,000 Trained by 2010 Act''.

SEC. 2. FINDINGS.

The Congress finds that—

(1) the National Science Foundation has long been a government leader in strengthening our Nation's information infrastructure;

(2) as automation and digitization reach the healthcare industry, that industry will need to draw heavily on the expertise of researchers funded by the National Science Foundation for the collection, processing, and utilization of information;

(3) the National Science Foundation's basic research, demonstrations, and curriculum development assistance are all required to help make sure the industry has the knowledge, procedures, and workforce necessary to take full advantage of advanced communications and information technology;

(4) the Bureau of Labor Statistics estimated that 136,000 Americans were employed in 2000 as information management professionals in the healthcare industry alone, with projected growth of 49 percent by 2010; and

(5) no systematic plan exists for designing and implementing systems and information tools and for ensuring that the healthcare workforce can make the transition to the information age.

SEC. 3. DEFINITIONS.

In this Act:

(1) DIRECTOR.—The term ''Director'' means the Director of the National Science Foundation.

(2) INFORMATION.—The term ''information'' means healthcare information.

(3) INSTITUTION OF HIGHER EDUCATION.—The term ''institution of higher education'' has the meaning given that term in section 101 of the Higher Education Act of 1965 (20 U.S.C. 1001).

SEC. 4. NATIONAL SCIENCE FOUNDATION RESEARCH.

(a) GRANTS.—

(1) IN GENERAL.—The Director, in consultation with the heads of other Federal agencies as appropriate, shall award grants for basic research on innovative approaches to improve information systems. Research areas may include—

(A) information studies;

(B) population informatics;

(C) translational informatics; and

(D) data security, integrity, and confidentiality.

(2) MERIT REVIEW; COMPETITION.—Grants shall be awarded under this section on a merit-reviewed, competitive basis.

(3) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the National Science Foundation to carry out this subsection—

(A) $3,500,000 for fiscal year 2008;

(B) $3,600,000 for fiscal year 2009;

(C) $3,700,000 for fiscal year 2010; and

(D) $3,800,000 for fiscal year 2011.

(b) INFORMATICS RESEARCH CENTERS.—

(1) IN GENERAL.—The Director, in consultation with the heads of other Federal agencies as appropriate, shall award multiyear grants, subject to the availability of appropriations, to institutions of higher education (or consortia thereof) to establish multidisciplinary Centers for Informatics Research. Institutions of higher education (or consortia thereof) receiving such grants may partner with one or more government laboratories, for-profit institutions, or non-profit institutions.

(2) MERIT REVIEW; COMPETITION.—Grants shall be awarded under this subsection on a merit-reviewed, competitive basis.

(3) PURPOSE.—The purpose of the Centers shall be to generate innovative approaches in information by conducting cutting-edge, multidisciplinary research, including in the research areas described in subsection (a)(1).

(4) APPLICATIONS.—An institution of higher education (or a consortium thereof) seeking funding under this subsection shall submit an application to the Director at such time, in such manner, and containing such information as the Director may require. The application shall include, at a minimum, a description of—

(A) the research projects that will be undertaken by the Center and the contributions of each of the participating entities;

(B) how the Center will promote active collaboration among professionals from different disciplines, such as information technology specialists, health professionals, administrators, and social science researchers; and

(C) how the Center will contribute to increasing the number of information researchers and other professionals.

(5) CRITERIA.—In evaluating the applications submitted under paragraph (4), the Director shall consider, at a minimum—

(A) the ability of the applicant to generate innovative approaches to information and effectively carry out the research program;

(B) the experience of the applicant in conducting research in the information field, and the capacity of the applicant to foster new multidisciplinary collaborations;

(C) the capacity of the applicant to attract and provide adequate support for undergraduate and graduate students to pursue information research; and

(D) the extent to which the applicant will partner with government laboratories or for-profit or non-profit entities, and the role the government laboratories or for-profit or non-profit entities will play in the research undertaken by the Center.

(6) ANNUAL MEETING.—The Director shall convene an annual meeting of the Centers in order to foster collaboration and communication between Center participants.

(7) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated for the National Science Foundation to carry out this subsection—

(A) $4,500,000 for fiscal year 2008;

(B) $4,600,000 for fiscal year 2009;

(C) $4,700,000 for fiscal year 2010; and

(D) $4,800,000 for fiscal year 2011.

SEC. 5. NATIONAL SCIENCE FOUNDATION INFORMATION PROGRAMS.

(a) CAPACITY BUILDING GRANTS.—

(1) IN GENERAL.—The Director, in consultation with the heads of other Federal agencies as appropriate, shall establish a program to award grants to institutions of higher education (or consortia thereof) to establish or improve undergraduate and master's degree information programs, to increase the number of students who pursue undergraduate or master's degrees in information fields, to provide students with experience in government or industry related to their information studies, and, to the extent practicable, to do so using distance learning.

(2) MERIT REVIEW; COMPETITION.—Grants shall be awarded under this subsection on a merit-reviewed, competitive basis.

(3) USE OF FUNDS.—Grants awarded under this subsection shall be used for activities that enhance the ability of an institution of higher education (or consortium thereof) to provide high-quality information education, including certification and undergraduate and master's degree programs, and to recruit and retain increased numbers of students to such programs. Activities may include—

(A) developing and revising curriculum to better prepare undergraduate and master's degree students for careers in the information field;

(B) establishing degree and certificate programs in the information field;

(C) creating opportunities in information research for undergraduate students;

(D) acquiring equipment necessary for student instruction in these programs, including the installation of testbed networks for student use;

(E) providing opportunities for faculty to work with State, local, or Federal Government agencies, private industry, and other academic institutions to develop new expertise or to formulate new information research directions;

(F) establishing collaborations with other academic institutions or departments that seek to establish, expand, or enhance these programs;

(G) establishing student internships for students in these programs at State, local, and Federal Government agencies or in private industry;

(H) establishing or enhancing bridge programs in information fields between community colleges and universities; and

(I) any other activities the Director, in consultation with the heads of other Federal agencies as appropriate, determines will achieve the purposes described in paragraph (1).

(4) SELECTION PROCESS.—

(A) APPLICATION.—An institution of higher education (or a consortium thereof) seeking funding under this subsection shall submit an application to the Director at such time, in such manner, and with such contents as the Director may require. The application shall include, at a minimum—

(i) a description of the applicant's relevant research and instructional capacity, and in the case of an application from a consortium of institutions of higher education, a description of the role that each member will play in implementing the proposal;

(ii) a comprehensive plan by which the institution or consortium will build instructional capacity in information fields;

(iii) a description of relevant collaborations with State, local, or Federal Government agencies or private industry that inform the instructional program;

(iv) a survey of the applicant's historic student enrollment and placement data and a study of potential enrollment and placement for students enrolled in the proposed program; and

(v) a plan to evaluate the success of the proposed program, including postgraduate assessment of graduate school and job placement and retention rates as well as the relevance of the instructional program to graduate study and to the workplace.

(B) AWARDS.—The Director shall ensure, to the extent practicable, that grants are awarded under this subsection in a wide range of geographic areas and categories of institutions of higher education.

(5) ASSESSMENT REQUIRED.—The Director, in consultation with the heads of other Federal agencies as appropriate, shall evaluate the program established under this subsection no later than 3 years after the establishment of the program. At a minimum, the Director shall evaluate the extent to which the grants have achieved their objectives of increasing the quality and quantity of students pursuing undergraduate or master's degrees in information fields. The Director shall make this assessment publicly available.

(6) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the National Science Foundation to carry out this subsection—

(A) $9,000,000 for fiscal year 2008;

(B) $9,200,000 for fiscal year 2009;

(C) $9,400,000 for fiscal year 2010; and

(D) $9,600,000 for fiscal year 2011.

(b) SCIENTIFIC AND ADVANCED TECHNOLOGY ACT OF 1992.—

(1) GRANTS.—The Director shall provide grants under the Scientific and Advanced Technology Act of 1992 for the purposes of section 3(a) and (b) of that Act, except that the activities supported pursuant to this subsection shall be limited to improving education in fields related to information.

(2) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the National Science Foundation to carry out this subsection—

(A) $7,000,000 for fiscal year 2008;

(B) $7,200,000 for fiscal year 2009;

(C) $7,400,000 for fiscal year 2010; and

(D) $7,600,000 for fiscal year 2011.

The SPEAKER pro tempore. Pursuant to the rule, the gentleman from Oregon (Mr. WU) and the gentleman from Texas (Mr. HALL) each will control 20 minutes.

The Chair recognizes the gentleman from Oregon.

GENERAL LEAVE

Mr. WU. Mr. Speaker, I ask unanimous consent that all Members may have 5 legislative days to revise and extend their remarks and to include extraneous material on H.R. 1467, the bill now under consideration.

The SPEAKER pro tempore. Is there objection to the request of the gentleman from Oregon?

There was no objection.

Mr. WU. Mr. Speaker, I yield myself such time as I may consume.

Mr. Speaker, I and other Members of the Science and Technology Committee have been working on the issue of health care IT for several years. The genesis of this legislation, H.R. 1467, was a roundtable I held in Oregon in August 2005. This roundtable was followed by an Environment, Standards and Technology Subcommittee field hearing on health care information technology in February of 2006. Representative REICHERT of Washington chaired the hearing, and our current ranking member, Mr. HALL, also had staff in attendance.

One of the common issues raised at both of these events was the lack of trained people who are experts in both health care and in information technology. Despite the Federal focus on developing a national electronic health care record system, there is no systematic plan for the training of current and prospective professionals in both health care and IT. Without this specialized training, the technology can sit on health care provider's desks as a box, cold and unused rather than as an integrated system of health care doing what it should do.

The need for individuals to manage health care IT is expected to grow 49 percent between 2000 and 2010, and nearly 75 percent of health care organizations indicate there are not enough qualified applicants for these positions.

I would like to point out that the Science and Technology Committee has a history of developing specific and specialized training and research programs for IT professionals.

During the 107th Congress, the committee became concerned that the lack of specialized computerized training for IT students and professionals was a contributing factor in the lack of decent computer security practices and software. As a result, the committee developed and moved H.R. 3394, the CyberSecurity Research and Development Act which subsequently became Public Law 107–305.

The bill under consideration today, H.R. 1467, consists of four components. It authorizes the National Science Foundation, NSF, to award research grants for innovative approaches enhancing health care informatics. I want to make clear that this provision builds upon existing NSF activities.

It authorizes NSF to support multidisciplinary health and medical informatics research centers to perform research and to train qualified health care informatics personnel and professionals.

Next, it authorizes NSF to establish a grant program to improve undergraduate, master's and certificate programs in health care informatics. The goal is to increase the number of students and the quality of training in their field. This program allows both 4-year and 2-year institutions to participate as well as allowing for the development of continuing education curricula.

Finally, it authorizes NSF's Advanced Technology Education Program which focuses solely on 2-year colleges to support improved education and technical training for health care informatics.

H.R. 1467 is a bipartisan product of the Science and Technology Committee. Ranking Member HALL and I introduced this bill in the last Congress. In this Congress, we introduced this legislation, along with Chairman GORDON and Ranking Member GINGREY of the Technology and Innovation Subcommittee.

I have spoken to Dr. GINGREY about health care IT, and he knows from his firsthand experience the challenges involved in integrating IT into health care settings.

We all recognize the benefits that an integrated health IT network could provide in terms of improved patient care, safety, privacy and potentially cost savings. However, investment in physical infrastructure and technology alone is not enough. We need research and training programs for health care and IT professionals in order to use and design the system well.

Mr. Speaker, I reserve the balance of my time.

Mr. HALL of Texas. Mr. Speaker, I yield myself such time as I may consume.

I rise today in support of H.R. 1467, the 10,000 Trained by 2010 Act, and the primary goal it seeks to achieve. If implemented correctly and efficiently, health information technology, which we call IT, can revolutionize our health care system.

However, we have to have an educated workforce properly trained in health IT in order for it to be successful. This is what H.R. 1467 is all about. NSF is already doing incredible work in the IT area, but this measure focuses specifically on health IT by providing grants on new innovative approaches for health care hardware and software solutions.

Creating health medical informatics research centers and making improvements to undergraduate and master's degree programs for health care informatics, it also expands the Advanced Technology Education Program to include health IT.

The activities supported by H.R. 1467 are important if we are to have a sufficiently trained health IT workforce, and I encourage my colleagues to adopt this bill.

Mr. Speaker, I reserve the balance of my time.

Mr. WU. Mr. Speaker, I thank the gentleman from Texas for working with me, and his staff for working with our staff over a period of 3 years on this legislation.

I inquire of the gentleman whether he has any additional speakers.

Mr. HALL of Texas. We have no further speakers, and I yield back the balance of my time.

Mr. WU. Mr. Speaker, I thank the staff on both sides of the aisle on the Science Committee for working hard through two Congresses to bring this legislation to the floor, and I encourage all of my colleagues to vote for adoption of this legislation.

Ms. EDDIE BERNICE JOHNSON of Texas. Mr. Speaker, I rise in support of H.R. 1467, the 10,000 Trained by 2010 Act.

The bill requires the National Science Foundation to award competitive grants for research to improve health care information systems.

As our health care information moves from paper to computer-based storage methods, it becomes increasingly important to develop systematic methods for organizing and sharing biomedical information.

Digital medical records must be transferable, and above all, patient confidentiality must be ensured.

H.R. 1467 would fund scientific and engineering activities to improve education in the health care information fields. The funding would be used to develop innovative approaches in health care information; and help students earn advanced degrees in these fields.

Mr. Speaker, this bill would promote technologies that will save us taxpayer dollars over the long term. I urge my colleagues to support H.R. 1467.

Mr. WU. Mr. Speaker, I yield back the balance of my time.

The SPEAKER pro tempore. The question is on the motion offered by the gentleman from Oregon (Mr. WU) that the House suspend the rules and pass the bill, H.R. 1467.

The question was taken; and (two-thirds being in the affirmative) the rules were suspended and the bill was passed.

A motion to reconsider was laid on the table.

□ 1140

GREEN ENERGY EDUCATION ACT OF 2007

Mr. LIPINSKI. Mr. Speaker, I move to suspend the rules and pass the bill (H.R. 1716) to authorize higher education curriculum development and graduate training in advanced energy and green building technologies, as amended.

The Clerk read the title of the bill.

The text of the bill is as follows:

H.R. 1716

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the ''Green Energy Education Act of 2007''.

SEC. 2. DEFINITION.

For the purposes of this Act:

(1) DIRECTOR.—The term ''Director'' means the Director of the National Science Foundation.

(2) HIGH PERFORMANCE BUILDING.—The term ''high performance building'' has the meaning given that term in section 914(a) of the Energy Policy Act of 2005 (42 U.S.C. 16194(a)).

(3) SECRETARY.—The term ''Secretary'' means the Secretary of Energy.

SEC. 3. GRADUATE TRAINING IN ENERGY RESEARCH AND DEVELOPMENT.

(a) FUNDING.—In carrying out research, development, demonstration, and commercial application activities authorized for the Department of Energy, the Secretary may contribute funds to the National Science Foundation for the Integrative Graduate Education and Research Traineeship program to support projects that enable graduate education related to such activities.

(b) CONSULTATION.—The Director shall consult with the Secretary when preparing solicitations and awarding grants for projects described in subsection (a).

SEC. 4. CURRICULUM DEVELOPMENT FOR HIGH PERFORMANCE BUILDING DESIGN.

(a) FUNDING.—In carrying out advanced energy technology research, development, demonstration, and commercial application activities authorized for the Department of Energy related to high performance buildings, the Secretary may contribute funds to curriculum development activities at the National Science Foundation for the purpose of improving undergraduate or graduate interdisciplinary engineering and architecture education related to the design and construction of high performance buildings, including development of curricula, of laboratory activities, of training practicums, or of design projects. A primary goal of curriculum development activities supported under this section shall be to improve the ability of engineers, architects, landscape architects, and planners to work together on the incorporation of advanced energy technologies during the design and construction of high performance buildings.

(b) CONSULTATION.—The Director shall consult with the Secretary when preparing solicitations and awarding grants for projects described in subsection (a).

(c) PRIORITY.—In awarding grants with respect to which the Secretary has contributed funds under this section, the Director shall give priority to applications from departments, programs, or centers of a school of engineering that are partnered with schools, departments, or programs of design, architecture, and city, regional, or urban planning.

The SPEAKER pro tempore. Pursuant to the rule, the gentleman from Illinois (Mr. LIPINSKI) and the gentleman from Texas (Mr. MCCAUL) each will control 20 minutes.

The Chair recognizes the gentleman from Illinois.

GENERAL LEAVE

Mr. LIPINSKI. Mr. Speaker, I ask unanimous consent that all Members may have 5 legislative days to revise and extend their remarks and to include extraneous material on H.R. 1716, the bill now under consideration.

The SPEAKER pro tempore. Is there objection to the request of the gentleman from Illinois?

There was no objection.

Mr. LIPINSKI. Mr. Speaker, I yield myself such time as I may consume.

Today, I rise in support of H.R. 1716, the Green Energy Education Act of 2007. I'd like to thank Mr. MCCAUL and Mr. HILL for their leadership on this important legislation.

This bill authorizes the Department of Energy to contribute funds to the National Science Foundation's successful Integrative Graduate Education and Research Traineeship program, known as IGERT. IGERT awards prepare doctoral students by integrating research and education in innovative ways that are tailored to the unique requirement of newly emerging interdisciplinary fields and new career options.

Many future green energy technologies, such as thin film solar technologies, will require interdisciplinary teams of scientists and engineers such as those trained under the IGERT program.

This bill also authorizes the Department of Energy's high-performance-building technology programs to contribute to the National Science Foundation's ongoing curriculum development activities with the goal of improving the ability of engineers and architects to design and construct high-performance buildings.

Innovative technologies, coupled with a whole-buildings approach that optimizes interactions among building systems and components, enable buildings to use considerably less energy, while also helping to meet national goals for sustainable development, environmental protection and energy security.

The high-performance, or green, building movement is growing rapidly, but it is still a very small slice of the multibillion dollar building industry; and there's a real gap in university level education and training for the next generation of green building professionals. This bill helps address that gap.

In summary, this bill addresses a critical need to provide resources to universities to update their curricula and research efforts in alternative energy and high-performance buildings, and it improves coordination between the Department of Energy and the National Science Foundation in achieving this goal.

I'm pleased to support H.R. 1716, the Green Energy Education Act of 2007. Again, I want to commend Mr. MCCAUL and Mr. HILL for this important legislation; and I urge my colleagues to support H.R. 1716.

Mr. Speaker, I reserve the balance of my time.

Mr. MCCAUL of Texas. Mr. Speaker, I yield myself as much time as I may consume.

I want to first thank Mr. LIPINSKI and my colleagues on both sides of the aisle for their strong support of this bill, which I introduced in the last Congress; and I'm pleased to see it get to the House floor in this Congress.

The National Academies' Rising Above the Gathering Storm report echoed the call of many in the academic and business community for greater need to recruit and develop scientific and engineering talent to work on solving problems of national need.

Like many Members of Congress, I'm concerned about America's dependence on foreign sources of energy. Our reliance on imported energy only serves to increase our vulnerability to both external events and the actions of regimes that are, in many cases, openly hostile to the interests of the United States. One of the ways we can reduce the need for energy imports is to use our energy more efficiently.

Buildings consume more energy than any other sector of the economy, including industry and transportation. According to the U.S. Department of Energy, American buildings consume 39 percent of our Nation's primary energy and 70 percent of electricity. However, energy efficient building practices are not being fully utilized, in